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Hjalmar Edzer Ayco Huitema

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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BRIARCLIFF MANOR, NY 10510

EXAMINER

NGUYEN, JIMMY H

ART UNIT

PAPER NUMBER

2629

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/573,744	<b>Applicant(s)</b> HUITEMA ET AL.	
	<b>Examiner</b> JIMMY H. NGUYEN	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This Office Action is made in response to applicant's papers filed on 03/28/2006. Claims 1-17 are currently pending in the application. An action follows below:

#### ***Notice to Applicant***

2. As best understood, since the known display unit is disadvantageous, inter alia, as within a given frame period, a relatively small number of rows and columns can be driven, an object of the invention is to provide a display unit, which, within a given frame period, can drive a relatively large amount of rows and columns (see the specification, page 3, lines 23-28). Figures 1-3 and the corresponding description, pages 9-12, explicitly disclose a known display unit, which, within a given frame period, can drive a relatively small number of rows and columns (see the specification, page 12, lines 15-18).

In other words, figures 1-3 are shown a known display device.

Furthermore, the foreign applications (EP 03102135.5; see figures 4-8; and EP 03102403.7; see figures 3-6) both disclose a known display device as shown in figures 1-3 of this pending application.

For the above reasons, examiner believes figures 1-3 shown a known display device. Accordingly, a drawing objection is made as follows:

#### ***Drawings***

3. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37

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CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because figures 3, 5 and 6 do not clearly show the waveforms of signals.

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features, “multiplexing circuitry for coupling the selection driving circuitry (40) to switching elements (12) for sequentially selecting groups of switching elements (12), wherein first groups of switching elements (12) are located in the active part of the display panel (90) and a second group of switching elements (12) is located in the inactive part of the display panel (90)” in claim 11, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet”

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pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

7. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

In the instant case, there is no section heading, such as "Background of the Invention", "Brief Summary of the Invention", and etc., in the specification.

#### ***Claim Rejections - 35 USC § 101***

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8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claim 17 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. This claim defines “a processor program product” comprising functional descriptive material (i.e., a computer program). However, the claim does not define a “computer-readable medium or computer-readable memory” and is thus non-statutory for that reason (i.e., “When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized” - Guidelines Annex IV). The scope of the presently claimed invention encompasses products that are not necessarily computer-readable, and thus NOT able to impart any functionality of the recited program.

The examiner suggests amending the claim(s) to embody the program on “processor/computer-readable medium” or equivalent; assuming the specification does NOT define the computer readable medium as a “signal”, “carrier wave”, or “transmission medium” which are deemed non-statutory. Any amendment to the claim would be commensurate with its corresponding disclosure.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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11. Claims 4-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 4, this claim recites a feature, “a part comprises a group of columns”. Since it is unclear of what a part is, it is considered that the invention is not clearly defined.

As to claims 5-6, since these claims depend upon claim 4, these claims are therefore rejected for the same reason set forth in claim 4 above.

As to claim 7, this claim recites a feature, “a part comprises a group of rows”. Since it is unclear of what a part is, it is considered that the invention is not clearly defined.

As to claims 8-12, since these claims depend upon claim 7, these claims are therefore rejected for the same reason set forth in claim 7 above.

12. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13. Claims 11-13, 16 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claim 11, this claim contains the limitation, “multiplexing circuitry for coupling the selection driving circuitry (40) to switching elements (12) for sequentially selecting groups of switching elements (12), wherein first groups of switching elements (12) are located in the active part of the display panel (90) and a second group of switching elements (12) is located in the

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inactive part of the display panel (90)” (see last 4 lines), which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The disclosure, when filed, specifically Fig. 4 and the specification, page 13, lines 25-31, merely discloses a multiplexing circuitry (50) for coupling the data driving circuitry (30) (but not a selection driving circuitry (40)) to switching elements (12). Accordingly, the disclosure does not fairly describe how a multiplexing circuitry (50) couples a selection driving circuitry (40) to switching elements (12) in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claim 12, since this claim depends upon claim 11, this claim is therefore rejected for the same reason set forth in claim 11 above.

As to claim 13, this claim contains the limitations, “a drive unit (20,30,40,50,60) for providing during a frame period **data signals** to pixels (11) in an active part of the display panel (90) and for providing **reference signals** to pixels (11) in an inactive part of the display panel (90)” (see last 3 lines of claim 1) and “a controller (20) which is adapted to provide: **shaking data pulses** (Sh1, Sh2); **one or more reset data pulses** (R); and **one or more driving data pulses** (Dr); to the pixels (11)” (see last 5 lines of claim 13). The above underlined limitations require each of the pixels being provided (i) shaking data pulses (Sh1, Sh2), (ii) one or more reset data pulses (R), (iii) one or more driving data pulses (Dr), and (iv’) data signal when a pixel is in an active part of the display panel (90) or (iv”) reference signal when a pixel is in an inactive part of the display panel. In other words, this claim requires **a combination** of a waveform shown in figure 3 (note that, as mentioned above, the waveform of a voltage provided



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to a pixel, including shaking data pulses (Sh1, Sh2), one or more reset data pulses (R), and one or more driving data pulses (Dr), as shown in Fig. 3, is the waveform of a known display driving method) and a waveform shown in figure 5 or 6.

The disclosure does not fairly describe how a pixel can be driven by providing (i) shaking data pulses (Sh1, Sh2), (ii) one or more reset data pulses (R), (iii) one or more driving data pulses (Dr), and (iv') data signal when a pixel is in an active part of the display panel (90) or (iv'') reference signal when a pixel is in an inactive part of the display panel, as required by the above underlined limitations, in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claim 16, this claim contains the limitation, “the drive unit (20, 30, 40, 50, 60) being adapted for providing during a frame period **data signals to pixels (11) in an inactive part of the display panel (90)**” in lines 2-4, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The disclosure, when filed, specifically Fig. 4 and the specification, page 12, line 28 to page 13, line 20, explicitly discloses the drive unit providing during a frame period **data signals to pixels (11) in an active part** of the display panel (90) and providing **reference signals to pixels (11) in an inactive part** of the display panel (90). Accordingly, the disclosure does not fairly describe how the drive unit provides during a frame period **data signals to pixels in an inactive part** of the display panel in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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As to claim 17, this claim contains the limitation, “the processor program product comprising the function of: providing during a frame period **data signals to pixels (11) in an inactive part of the display panel (90)**” in lines 2-4, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The disclosure, when filed, specifically Fig. 4 and the specification, page 12, line 28 to page 13, line 20, explicitly discloses to provide during a frame period **data signals to pixels (11) in an active part** of the display panel (90) and to provide **reference signals to pixels (11) in an inactive part** of the display panel (90). Accordingly, the disclosure does not fairly describe how the pixel **in an inactive part** of the display panel is provided **data signals** during a frame period, in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

### ***Claim Rejections - 35 USC § 102***

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15. Claims 1-7 and 14-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Katase (US 6,762,744 B2), hereinafter Katase744.

As to claims 1 and 15, the invention is read in the Katase744 reference as follows:

Katase744 discloses a display unit (Fig. 3) and an associate driving method (Figs. 11-14), the

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display unit (Fig. 3) comprising: a display panel (100/A; Fig. 3) comprising bi-stable pixels (103, 104; Fig. 3; col. 6, lines 31-34); and a drive unit (300, 400, 130, 140; Fig. 3) for providing during a frame period data signals (image data D; col. 12, lines 17-22) to pixels in an active part of the display panel (90) (Fig. 13 showing the active part comprising pixels in two scanning lines ( $j$ ,  $j+1$ ) and Fig. 14 showing the active part being a "R" region) and for providing reference signals (the common voltage data Vcom; see col. 12, lines 17-22) to pixels (11) in an inactive part of the display panel (90) (Fig. 13 showing the inactive part comprising all scanning lines of pixels except for two scanning lines ( $j$ ,  $j+1$ ) and Fig. 14 showing the inactive part being a region surrounding the "R" region). See col. 12, lines 17-22 and 23-46.

Accordingly, all limitations of these claims are read in the Katase744 reference.

As to claim 2, Katase744 discloses that in a first frame, a first part is an active part and a second part is an inactive part, and, in a second frame, the second part is an active part and the first part is an inactive part (col. 12, lines 17-22 and 23-46).

As to claim 3, Katase744 discloses the reference signals (Vcom) having a voltage level situated between extreme voltage amplitudes of the data signals (Fig. 10; col. 6, line 64 to col. 7, line 13).

As to claim 4, Katase744 discloses either active part or inactive part comprises a group of columns (Fig. 14).

As to claim 5, Katase744 discloses the drive unit (130, 140, 300, 400) comprising data driving circuitry (a circuitry including elements 141-143 shown in Fig. 6) for supplying the data signals to the pixels (col. 8, lines 1-24); and multiplexing circuitry (a circuitry including elements

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144, 145 shown in Fig. 6) for coupling the data driving circuitry (141-143) via switching elements (103; Fig. 3) to the pixels in the active part of the display panel (90) and for supplying reference signals (common voltage data signal Dcom/Vcom) via switching elements (103) to the pixels in the inactive part of the display panel (90) (col. 8, lines 25-41; col. 12, lines 17-22 and 23-46).

As to claim 6, Katase744 discloses the multiplexing circuitry (144, 145) of the data line drive circuit (140) located on the display panel (100) (Fig. 3).

As to claim 7, Katase744 discloses either active part or inactive part comprises a group of rows (Fig. 14).

As to claim 14, Katase744 further teaches the image signal processing circuitry (300A shown in Fig. 3 or 310A shown in Fig. 27) comprising a storage medium (a memory 330; Fig. 27) for storing information to be displayed. Further, see col. 6, lines 12-17.

As to claims 16-17, the invention is read in the Katase744 reference as follows: Katase744 discloses a drive unit (Fig. 3) and an associate processor program product for providing data signals to a display panel (100/A; Fig. 3) comprising bi-stable pixels (103, 104; Fig. 3; col. 6, lines 31-34), the drive unit (300, 400, 130, 140; Fig. 3) for providing during a frame period data signals (common voltage data signals Dcom; col. 12, lines 20-21 disclosing "... then the common voltage data Dcom is outputted to the other lines") to pixels in an inactive part of the display panel (90) (Fig. 13 showing the inactive part comprising all scanning lines of pixels except for two scanning lines (j, j+1) and Fig. 14 showing the inactive part being a region surrounding the "R" region). Further, see col. 12, lines 17-22 and 23-46.

Accordingly, all limitations of these claims are read in the Katase744 reference.

***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katase744, as applied to claim 7 above, and further in view of Katase (US 6,650,462 B2), hereinafter Katase462.

As to claim 8, Katase744 further teach the drive unit (130, 140, 300, 400) comprising a selection driving circuitry (a scanning line drive circuit 130; Fig. 3) for selecting switching elements (103) coupled to the pixel (Fig. 3). Katase744 further discloses the first groups of switching elements are located in the active part of the display panel (see Fig. 13 or 14 in view of Fig. 3) and a second group of switching elements is located in the inactive part of the display panel (see Fig. 13 or 14 in view of Fig. 3). Katase744 is silent to the selection driving circuitry (130) comprising a shift register circuitry, as presently claimed. Accordingly, Katase744 discloses all limitations of this claim except for a shift register circuitry, as defined in this claim.

However, Katase462 discloses a related electrophoretic display (Fig. 3) comprising a drive unit (130, 140, 300, 400; Fig. 3) comprising a selection driving circuitry (a scanning drive circuit 130; Fig. 3) for selecting switching elements (103) coupled to the pixel (Fig. 3). Katase462 further teaches the selection driving circuitry (130) comprising a shift register circuitry (a Y-shift register 131; Fig. 36; col. 10, lines 41-51) for sequentially selecting groups of switching elements (103) (col. 10, lines 41-51). It would have been obvious to a person of

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ordinary skill in the art at the time of the invention was made to provide a shift register circuitry in the selection driving circuitry of Katase744, in view of the teaching in the Katase462 reference, because this would allow each scanning line of pixels sequentially selected, as generally recognized to a person of ordinary skill in the art at the time of the invention was made and as taught by the Katase462 reference (col. 10, lines 41-51).

As to claim 9, Katase744 further teaches the first groups of switching elements (103) being rows in the active part of the display panel and the second group of switching elements (12) comprising all other rows of the display panel to be selected by the scanning line drive circuit (130) simultaneously (Fig. 13 or 14; col. 12, lines 17-22). as discussed above, Katase462 discloses the selection driving circuitry (130) comprising a shift register circuitry (a Y-shift register 131; Fig. 36; col. 10, lines 41-51) for sequentially selecting groups of switching elements (103) (col. 10, lines 41-51). Accordingly, Katase744 in view of Katase462 discloses the invention of this claim.

As to claim 10, Katase744 and Katase462 both further teaches the scanning line drive circuit (130) located on the display panel (100/A) (see Fig. 3 of both references), thereby locating the shift register circuitry of the scan drive circuit on the display panel (100/A).

18. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katase744, as applied to claim 1 above, and further in view of Koninklijke Philips Electronics (EP 03102135.5), hereinafter Koninklijke.

As to claim 13, Katase744 further teaches the drive unit (130, 140, 300, 400) comprising a controller (300, 400; Fig. 3). Katase744 does not explicitly teach the controller adapted to provide shaking data pulses, one or more reset data pulses, and one or more driving data pulses,

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to the pixels. Accordingly, Katase744 discloses all limitations of this claim except for the controller adapted to provide shaking data pulses, one or more reset data pulses, and one or more driving data pulses, to the pixels, as defined in this claim.

However, Koninklijke discloses a related electrophoretic display (Fig. 5) comprising a drive unit (10, 15, 16; Fig. 5) comprising a controller (a processor 15; Fig. 5) which is adapted to provide shaking data pulses (SP1, SP2), one or more reset data pulses (RE); and one or more driving data pulses (Vdr); to the pixels (Fig. 6A, 6B; page 13, lines 12-14). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the controller of Katase744 adapted to provide shaking data pulses, one or more reset data pulses, and one or more driving data pulses to the pixels, in view of the teaching in the Koninklijke reference, because this would allow the information in the update area to be refreshed at the higher rate than the refresh rate of the other area, as taught by the Koninklijke reference (see Abstract).

### ***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Koninklijke Philips Electronics reference (EP 03102403.7) discloses a related electrophoretic display (Figs. 4-5) comprising a drive unit (10, 15, 16; Fig. 5) comprising a controller (a processor 15; Fig. 5) which is adapted to provide shaking data pulses (SP1, SP2), one or more reset data pulses (RE); and one or more driving data pulses (Vdr); to the pixels (Fig. 6A, 6B).

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20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is 571-272-7675.

The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jimmy H Nguyen/

Primary Examiner, Art Unit 2629